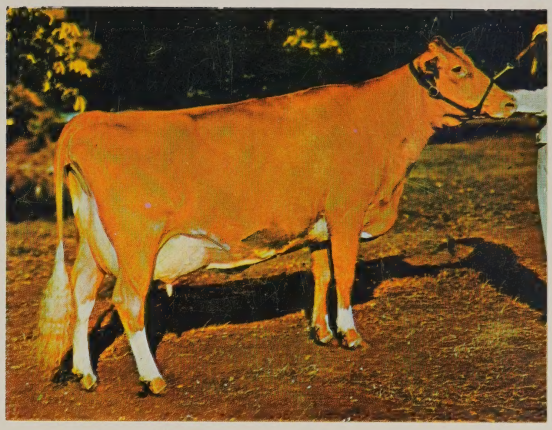


SEED STOCK FROM CANADA

DAIRY CATTLE

Canada has attained international recognition as a source of the high quality genetic materials so necessary in the efficient production of food and fibre. This booklet is one of the series "Seed Stock from Canada" which describes the scientific and commercial skills behind this success.

Those who buy Canadian, buy with confidence.

CONTENTS

THE CANADIAN DAIRY CATTLE HERD

Canada today is an internationally recognized source of quality dairy cattle.

In terms of health and productive efficiency the Canadian herd has developed into one of the major world sources of breeding stock. Canadian Holstein-Friesians have been purchased by progressive breeders in 46 countries. Canadian Jerseys, Guernseys and Ayrshires are also finding their place in world markets and are recognized for their efficiency and excellence of type.

This recognition has been gained through the ability and initiative of Canadian breeders and exporters and through the development of one of the best dairy cattle improvement systems in the world.

Government, university and breed association programs involving animal health, performance testing and recording, sire appraisal, pedigree recording and type classification all contribute to Canada's success in export markets.

The most discriminating world buyers can find in Canada today a depth of good breeding unavailable in many source countries. The soundness of pedigree and the reliability of production records are unquestioned.

This booklet provides further detail on these aspects of the Canadian industry. It is designed for use in those countries where Canadian cattle are now performing and in other countries where the need for greater efficiency in milk production is being recognized.

REGISTRATIONS BY BREED 1963-68

	1963	1964	1965	1966	1967	1968
Holstein-Friesian	94,750	90,200	88,500	90,300	96,300	92,800
Ayrshire	10,303	10,262	9,613	12,164	9,879	10,475
Jersey	16,272	10,924	11,603	9,929	9,682	8,668
Guernsey	5,775	6,090	6,131	5,656	5,917	4,681
Canadienne	749	864	732	769	893	779
Brown Swiss	336	497	472	580	510	606
Red Poll	613	501	437	256	257	197
*Milking Shorthorn	3,344	3,321	2,695	2,374	2,440	—

**The value for "Milking Shorthorns" is only an approximation.*

LEFT: Canadian dairy stock is shipped to a growing number of countries. Air transport is often preferred for particularly valuable cattle.

BELOW: The Canadian dairy industry welcomes many study missions from other countries such as this group from the West Indies.

ANIMAL HEALTH

Canada is free from serious livestock diseases including foot-and-mouth disease and rinderpest. The Animal Contagious Disease Act and Regulations provides controls designed to ensure that these diseases will never become established in the country. If they should appear, the act provides for their immediate eradication through slaughter and quarantine procedures.

Quarantine stations have been established at Lévis, Quebec, and Saint John, New Brunswick, with a maximum quarantine station on the island of Grosse Ile in the St. Lawrence River. The latter station was established to handle cattle from greater risk countries.

Canada's national veterinary service covers the entire populated area. There are approximately 2,000 veterinarians in the country of which 1,800 are active. The Health of Animals Branch of the Canada Department of Agriculture, with headquarters in Ottawa, employs 560 on a full-time basis. To complement the Health of Animals veterinarians, there are private practice veterinarians who ensure the Canadian farming community of up-to-date services and the advice necessary to maintain day-to-day animal health. About 800 of these private practice veterinarians are employed on a part-time or casual basis.

All cattle in the ten provinces of Canada have been tested for tuberculosis and brucellosis under the National Eradication Program. The tests are conducted by veterinarians of the Canada Department of Agriculture. Reactors in these tests are slaughtered at federally inspected packing plants and compensation is paid to the livestock owners. When infection is uncovered in a herd, that herd is retested until the disease is eradicated.

In addition to on-the-farm testing, screening programs in the form of market cattle testing and brucellosis ring testing are carried out on a continuing basis. Under the Market Cattle Testing Program, cows 30 months of age and over and breeding bulls are identified by a coded backtag from which the herd of origin of each animal is identified. In the case of brucellosis, a blood sample is collected at the time of slaughter. In the case of tuberculosis, the presence or absence of tuberculosis lesions is recorded.

When, as a result of these screening programs, there is a suspicion of brucellosis or tuberculosis infection, the herd of origin is traced and submitted to a retest. All blood samples are tested at one of eight Federal Animal Pathology Division laboratories located across the country. All post-mortem examinations are conducted by full-time meat inspectors at federally inspected plants.

As a result of these thorough and continuous herd and individual animal tests and as of 1966, the incidence of tuberculosis and brucellosis has been reduced to less than .087 per cent and .2 per cent respectively.

Calfhood vaccination using Strain 19 vaccine has been carried out in Canada under a Federal-Provincial Calfhood Vaccination Program and has controlled and reduced brucellosis infection to a point where a national program for complete eradication could be established. With this reduction, vaccination of calves is no longer required in many areas. As a result, the number of calves vaccinated has decreased markedly and will continue to decrease as eradication progresses.

The incidence of Johne's disease in Canada is low. There is a voluntary herd testing program to assist owners in the elimination of the disease. Reactors to the tests are slaughtered.

Mastitis in dairy cattle is controlled and treated by individual livestock owners using new drugs and antibiotics. Some provinces have developed programs to control mastitis in dairy cattle on an area basis. Legislation requires that milk for human consumption must be free from antibiotic residues. The milk is regularly tested by the provincial governments by use of the Disc Assay for antibiotics. To ensure the milk is free from residues, owners are not permitted to deliver milk from cattle injected with such antibiotics as penicillin for a minimum specified period after the injection.

All tests required by a country importing cattle from Canada are performed by government veterinarians with samples and specimens tested at a Federal Animal Pathology Division laboratory.

As a result of this application of veterinary science it is possible for even the most discriminating of world importers to buy from the Canadian herd with complete confidence in the health of their purchase.

Rigid controls have helped keep Canadian dairy herds free from serious livestock diseases. Milk samples are tested in laboratories for mastitis as part of a continuing program.

PERFORMANCE TESTING

1) The National Record of Performance Program

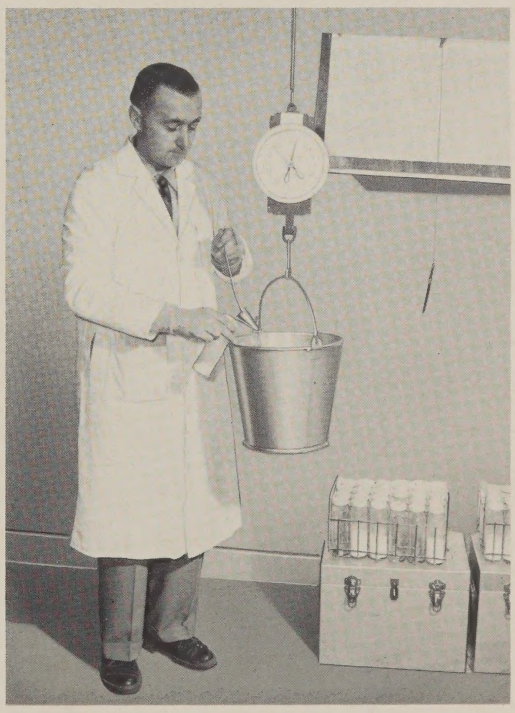
The Record of Performance (ROP) is sponsored and administered by the Canada Department of Agriculture. It was initiated in 1905 to provide a nationally uniform and official production recording system for all purebred dairy cattle throughout the country.

Breeders can use either of two recording plans. One is based on weights recorded by the breeder and verified during unannounced visits by inspectors. The other is based on the weights recorded by the inspectors. Under both plans the official weights are taken and recorded by the inspectors at approximately monthly intervals. And under both plans the butterfat content of milk from each animal is determined by the inspectors from samples taken at the time the milk weights are recorded. Milk weights and samples are taken by the inspectors during both the evening and morning milking periods. More than 99 per cent of Canadian cattle are milked twice daily.

All weights and tests are forwarded to the national headquarters for computer compilation and are under the constant surveillance of the chief ROP inspector. Any irregularities are quickly checked and when a particularly good performance is being recorded additional official tests may be required.

All cows must be properly identified; registration certificates must be made available to the inspector; and all purebred cows in the herd must be tested. The selection of only high performance cows for official test is not permitted.

On completion of the lactation the breeder is provided with a certificate of performance. The 305-day performance is the basis of comparison except where lifetime performance is involved.



Record of Performance (ROP) inspectors sample and weigh milk in the milking parlors.

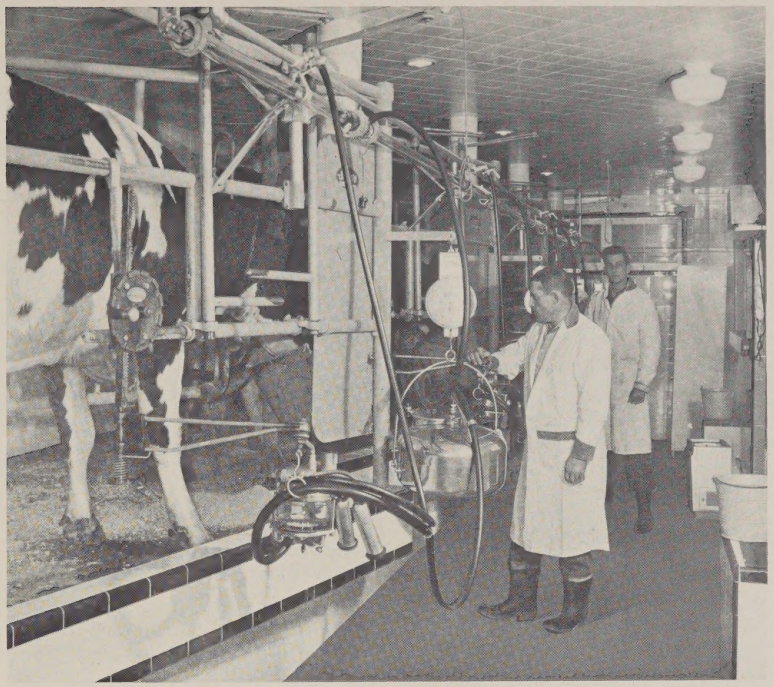
The purpose of this program is to provide breeders with a sound and nationally uniform basis of appraising the performance of their cattle as a guide to constructive breeding programs.

2) The Provincial Dairy Herd Improvement Association Program

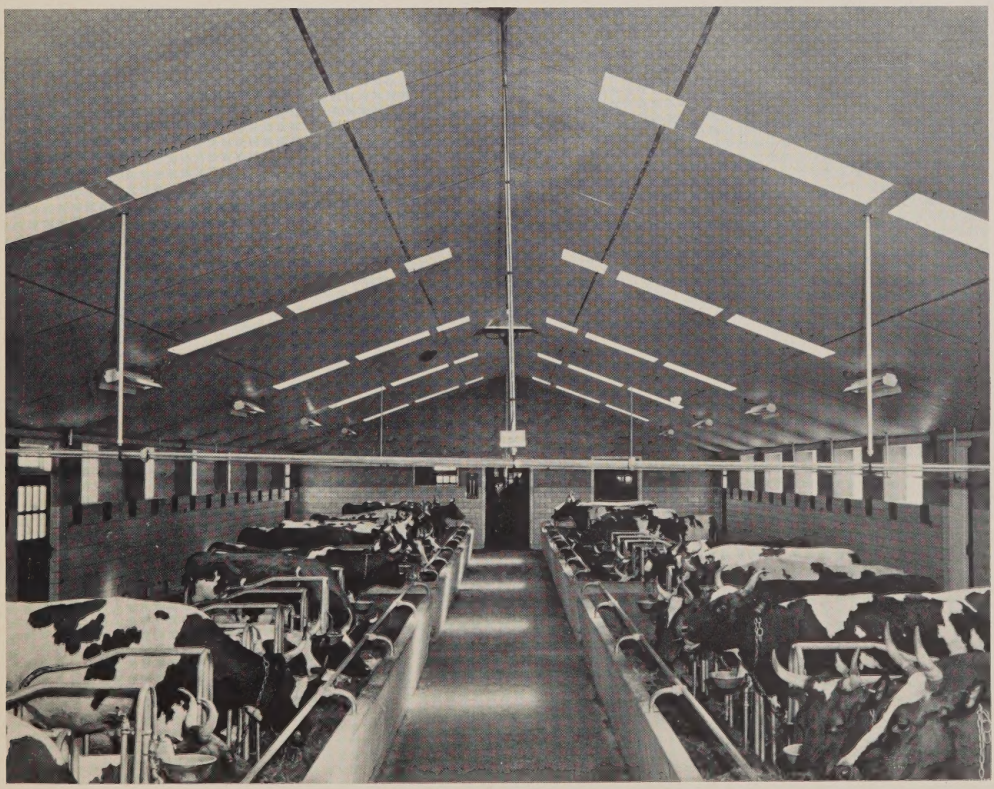
Supplementary to the national performance testing system, most of the provinces in Canada have Dairy Herd Improvement (DHI) programs which serve the non-purebred or grade herds and herds with some purebred and some grade cattle. The testing procedure is similar to that used in the national system and has the same purpose. In some provinces breeders are provided not only with production figures but additional information on feed conversion rates and cost of production. Where DHI records are suitable they are used with ROP records in sire appraisal work.

These programs provide Canadian breeders with the prime guideline to sound selection for performance — and they supply the basic data for sire appraisal.

RIGHT: Modern methods mean more efficiency. This milking parlor with its up-to-the-minute equipment is typical in the Canadian dairy industry.



BELOW: Today's barn — large, airy and well-appointed.



SIRE APPRAISAL

Where artificial insemination is in extensive use it is possible to achieve widespread improvement by concentrating on the use of bulls which are known improvers or whose offspring have on the average established performances superior to those of other sires. An increasing number of dairy cattle in Canada today have listed in their pedigrees the name of one or more of these outstanding sires.

The method of sire appraisal used in Canada is the Herdmate Comparison Method. Initiated in 1958, it is probably the most important development in the dairy cattle improvement program. None of the methods used prior to this allowed for satisfactory elimination of variations due to environmental differences.

Sire appraisal by Daughter Herdmate Comparison is designed for use where semen from a number of different bulls is used in a large number of herds in the same period. It is assumed that all daughters of the various bulls in any one herd are producing under the same conditions and management, and therefore their performances can be justly compared.

The performance of the first lactation daughter or daughters of a given bull is compared to the performance of daughters of other bulls during the same six-month period. Thus, herdmate are performing at the same time under the same conditions.

A refinement of the method is the use of "weighting factors". Having obtained the difference between the particular bull's daughters and the herdmates in each of a number of herds, the problem is to combine these separate pieces of information to give each its proper emphasis.

APPRAISAL OF SIRE "X"

Example

	Daughters of Sire "X"		Herdmates				
Freshened Mar.-Aug./63	**No. of Daughters**	**Average BCA (Milk)**	**(Daughters of Other Bulls) No.**	**Average BCA**	**Diff. in BCA**	**Weighting Factor**	**Weighted Difference (BCA)**
in Herd ....A	2	108	2	104	+ 4	1.0	+ 4.0
" " ....B	2	114	1	98	+ 16	.7	+ 11.2
etc. C	4	102	5	100	+ 2	2.2	+ 4.4
D	3	122	6	101	+ 21	2.0	+ 42.0
E	3	104	4	102	+ 2	1.7	+ 3.4
Freshened Sept./63 Feb./64							
A	1	106	1	107	− 1	.5	− .5
B	3	110	2	100	+ 10	1.2	+ 12.0
E	2	106	4	99	+ 7	1.3	+ 9.1
F	2	108	3	106	+ 2	1.2	+ 2.4
Mar.-Aug./64							
B	2	113	3	103	+ 10	1.2	+ 12.0
C	1	102	2	106	− 4	.7	− 2.8
G	2	96	3	100	− 4	1.2	− 4.8
H	3	98	4	94	+ 4	1.7	+ 6.8
J	3	109	1	103	+ 6	.7	+ 4.2
Totals,	33	107				17.3	103.4

Sire Rating is $\frac{103.4}{17.3}$ = 5.98 BCA points or approximately 6%

. . . Sire "X" is rated as + 6

Ratings are carried out semi-annually. Rating data is cumulative.

The average yield of two daughters compared with that of one herdmate in one herd should obviously receive less attention in bull evaluation than a comparison in another herd between two daughters and five herdmates.

The following formula shows the correct emphasis for each herd's contribution. The weighting given to records in different herds is calculated by a simple formula:

$$\frac{\text{Number of daughters} \times \text{number of herdmates}}{\text{Number of daughters} + \text{number of herdmates}} = \begin{matrix}\text{number of effective}\\ \text{daughters (or}\\ \text{weighting factor)}\end{matrix}$$

The accuracy of a comparison increases with numbers.

Because of the constant need for greater herd production efficiency young sires considered for use in artificial insemination centres must be appraised quickly and the qualities of their offspring made known.

To accomplish this, selected groups of young sires are used widely for a short period and then withdrawn from general service until the average performance and type of their daughters is known. The sires which prove their superiority are then returned to wide usage.

This process of elimination not only ensures that the best genetic material is being used but that superior producing ability and type are being transmitted and dispersed through Canadian herds.

BREED CLASS AVERAGE INDEX (BCA)

In comparing performances by cattle of different ages an index system is used which not only facilitates these comparisons but provides a sound basis for measuring improvement in the national, provincial, or individual herds. Canadian production figures for each age class of each breed have been established based on large numbers of records completed from 1949-1952.

These national base period averages are assigned the base index of 100 and the performance of all cows in the same breed and age class is rated by index in relation to this base average. Thus it is possible to compare performances by relating them to a common standard. As an example:

A given performance at 2 years, 10 days is 10,000 pounds (4,535.9 kg) of milk and 420 pounds (190.5 kg) of butterfat. The base period average (index 100) for this breed and age class is 9,408 pounds (4,267.3 kg) of milk and 345 pounds (156.4 kg) of butterfat. The BCA index for the milk and butterfat production of this lactation is:

$$\text{Milk} - \frac{10{,}000\ (4{,}535.9)}{9{,}408\ (4{,}267.3)} \times 100 = 106$$

$$\text{Butterfat} - \frac{420\ (190.5)}{345\ (156.4)} \times 100 = 122$$

A proper evaluation of any given performance is made by considering it first in relation to the herd average, second in relation to the area average and third in relation to the national average. The BCA index system facilitates these comparisons and is widely used in sire appraisal calculation, in selection and culling within herds and in both export and domestic trade specifications.

RELATION OF GENETIC QUALITY TO COST OF PRODUCTION

In any country the cost of producing milk is influenced by the costs of the various inputs such as feed and labor and by the degree of productivity that can be developed in the cattle to which these inputs are applied. Productivity is limited to those levels set by the genetic make-up of the cattle. There is, therefore, a point beyond which production costs cannot be significantly reduced by improved management.
The producing efficiency of a dairy herd is governed by two main factors:

A. Management:
   1) Nutrition
   2) Breeding efficiency (early calving and regular yearly calving)
   3) Animal health
   4) Selection programs
   5) Milking procedures and general care.

B. Genetic Potential of the Individuals in the Herd:
   If management levels are not a limiting factor, the dairy cow is allowed to display her genetic potential. Those with higher potentials will outproduce their counterparts.

In many areas of the world where management techniques have been improved and where veterinary techniques for the maintenance of animal health have been developed, it is now possible, by introducing cattle with a high genetic potential for milk production, to materially reduce the per unit cost of production. An investment in sound breeding stock under these conditions can lower production costs throughout the life of any dairy enterprise.

TYPE STANDARDS

Relationship of Type to Productive Capacity and Longevity:

The primary purpose of the dairy cow is to produce milk efficiently. Desirable type is one of the many contributing factors involved. Since the raising of replacement heifers is a costly operation, the longer the average productive life of the herd, the more economic production will be. Type must allow for ease of calving as well as ability to produce for long periods of time at a high level.

Defects such as pendulous udders, off-balance udders, poor feet and legs, excepceptionally long teats, will likely limit the productive life of many good producers in the herd.

A major step towards setting a national type standard in Canada was the development of the true type cow and bull models. Committees for each breed studied the best animals available and, with the combined efforts of a sculptor and artist, evolved the true type models.

A second major step was the uniform dairy cow score card developed to blend both utility and beauty in Canadian dairy cattle. This score card is applicable to all dairy breeds and emphasizes various parts of the animal in accord with experience in breeding efficient dairy cattle.

Type analysis is really a balanced appraisal of good points and defects and the constant study of type to ensure close relationship between form and efficient production. In the Dairy Cow Score Card there are 30 points allotted to the mammary system. Considerable emphasis is also placed on good feet and legs.

Dairy character, which is a component of type, is a useful indicator of production and is strongly correlated with genetic productive ability.

Research is constantly under way to find that combination of type characteristics which will allow the highest possible production over the longest period of time.

Any findings of these studies are made available to all Canadian breeders to assist in the perfection of the national herd. The national type appraisal system in Canada has been a great asset to Canadian breeders. Canadian dairy cows have a reputation for high udder attachments and medium size teats which are less prone to injury and mastitis. Canada's dairy industry is geared toward production and it is the belief of experts that a cow which will classify Excellent has the ability to outproduce cows of a lower classification.

DAIRY COW UNIFIED SCORE CARD

Breed characteristics should be considered in the application of this score card		Perfect Score
Order of observation		
1. GENERAL APPEARANCE		**30**
(*Attractive individuality with, feminity, vigor, stretch, scale, harmonious blending of all parts, and impressive style and carriage. All parts of a cow should be considered in evaluating a cow's general appearance*)	10	
BREED CHARACTERISTICS —		
HEAD — clean cut, proportionate to body; broad muzzle with large, open nostrils; strong jaws; large, bright eyes; forehead, broad and moderately dished; bridge of nose straight; ears medium size and alertly carried		
SHOULDER BLADES — set smoothly and tightly against the body	10	
BACK — straight and strong; loin, broad and nearly level		
RUMP — long, wide and nearly level from **HOOK BONES** to **PIN BONES;** clean cut and free from patchiness; **THURLS,** high and wide apart; **TAIL HEAD,** set level with backline and free from coarseness; **TAIL,** slender		
LEGS AND FEET — bone flat and strong, pasterns short and strong, hocks cleanly moulded. **FEET,** short, compact and well rounded with deep heel and level sole. **FORE LEGS,** medium in length, straight, wide apart, and squarely placed. **HIND LEGS,** nearly perpendicular from hock to pastern, from the side view, and straight from the rear view	10	
2. DAIRY CHARACTER		**20**
(*Evidence of milking ability, angularity, and general openness, without weakness; freedom from coarseness, giving due regard to period of lactation*)		
NECK — long, lean, and blending smoothly into shoulders; clean cut throat, dewlap, and brisket **WITHERS,** sharp. **RIBS,** wide apart, rib bones wide, flat, and long. **FLANKS,** deep and refined. **THIGHS,** incurving to flat, and wide apart from the rear view, providing ample room for the udder and its rear attachment. **SKIN,** loose, and pliable	20	
3. BODY CAPACITY		**20**
(*Relatively large in proportion to size of animal, providing ample capacity, strength, and vigor*)		
BARREL — strongly supported, long and deep; ribs highly and widely sprung; depth and width of barrel tending to increase toward rear	10	
HEART GIRTH — large and deep, with well sprung fore ribs blending into the shoulders; full crops; full at elbows; wide chest floor	10	
4. MAMMARY SYSTEM		**30**
(*A strongly attached, well balanced, capacious udder of fine texture indicating heavy production and a long period of usefulness*)		
UDDER — symmetrical, moderately long, wide and deep, strongly attached, showing moderate cleavage between halves, no quartering on sides; soft, pliable, and well collapsed after milking; quarters evenly balanced	10	
FORE UDDER — moderate length, uniform width from front to rear and strongly attached	6	
REAR UDDER — high, wide, slightly rounded, fairly uniform width from top to floor, and strongly attached	7	
TEATS — uniform size, of medium length and diameter, cylindrical, squarely placed under each quarter, plumb, and well spaced from side and rear views	5	
MAMMARY VEINS — large, long, tortuous, branching	2	
"Because of the natural undeveloped mammary system in heifer calves and yearlings, less emphasis is placed on mammary system and more on general appearance, dairy character, and body capacity. A slight to serious discrimination applies to overdeveloped, fatty udders in heifer calves and yearlings."		
Subscores are not used in breed type classification.	**TOTAL**	**100**

Canadian cows have a reputation for high udder attachments and medium-sized teats which are less prone to injury and mastitis.

CLASSIFICATION SYSTEMS

Type classification is carried on by each of the various dairy breed associations and, though the approach differs slightly in each case, all systems are based on the Dairy Cow Score Card. A uniform score card is now used by all breed associations. The score card for cows is divided into four main sections: general appearance, including breed characteristics, 30 points; dairy characteristics, 20 points; body capacity, 20 points; mammary system, 30 points. Under each of the main sections are subsections which assess more specific characteristics.

To encourage improvement of both type and production, official classifiers are employed by the breed associations and they classify cattle at regular intervals at the request of the breeder. Under certain circumstances these classifiers may travel abroad to assist in those countries where Canadian cattle are now performing. Each of the individual breed associations gives recognition for type excellence as well as for production excellence.

SIRE APPRAISAL REGARDING TYPE OF OFFSPRING

The Department of Animal Science at the University of Guelph in Guelph, Ontario, conducts a detailed analysis of type characteristics of the progeny of bulls. This information is gained from the official classification forms and is distributed across the country.

With the Holstein breed as well as Ayrshire and Guernsey, all bulls are reported on the percentage of their daughters that are graded Good Plus or Better (i.e. Good Plus, Very Good, Excellent) in the final class rating.

The Canadian Jersey Cattle Club takes a slightly different approach. The basis of its sire comparisons is the average score of daughters rather than the per cent Good Plus and Better.

The reports for each sire under each item in all breeds have significance only when compared with the breed average figures, these being listed above the sire's summary. These reports are revised semi-annually and are made available across the country with editions for each breed.

The result of material presented in this publication facilitates corrective mating and type improvement and has a considerable impact on the development and progress of Canada's national herd.

HOLSTEIN-FRIESIAN TYPE CLASSIFICATION SIRE SUMMARY

PREPARED BY THE DEPARTMENT OF ANIMAL HUSBANDRY ONTARIO AGRICULTURAL COLLEGE IN CO-OPERATION WITH THE HOLSTEIN-FRIESIAN ASSOCIATION OF CANADA AND THE ONTARIO ASSOCIATION OF ARTIFICIAL BREEDERS.

					PERCENTAGE GOOD PLUS AND BETTER										PERCENTAGE			
				BREED AVERAGE →	47%	51%	82%	72%	51%	50%	54%	48%	44%	78.6	13%	67%	20%	
NAME OF SIRE	REG. NO.	OWNER CODE	NUMBER OF DAUGHTERS	NUMBER OF HERDS	CLASS	GENERAL APPEARANCE	DAIRY CHARACTER	BODY CAPACITY	MAMMARY SYSTEM	FORE UDDER	REAR UDDER	LEGS & FEET	RUMP	AVERAGE SCORE	SIZE			STUDY NO
															LARGE	MED	SMALL	
ROMANDALE SUPREME	254607	1	18	6	89	89	89	100	83	78	89	61	72	81.4	67	33	0	2
ROMANDALE SUPREME DIPLOMAT	261410	1	15	1	40	40	93	93	67	60	53	33	20	77.6	33	60	7	1
ROMANDALE TEXAL REFLECTION	261407	1	23	3	48	48	87	87	48	83	43	78	39	78.8	26	61	13	2
ROMANDALE TOPPER	264005	1	22	5	68	59	95	95	82	77	64	55	73	80.0	14	64	23	2
ROMULUS ABBEKERK RAG APPLE	214244	1	31	23	68	74	97	97	65	55	71	48	81	80.1	26	61	13	3
ROMULUS RAG APPLE FINEST	257866	1	10		60	60	90	90	60	50	50	40	10	78.8	30	60	10	1
RONLIN RAG APPLE SUPREME	238504	1	11		36	55	82	91	55	55	45	73	45	78.1	0	82	18	1
RONLOE PRINCE	236136	1	18	3	50	50	94	83	72	78	67	50	17	79.1	6	67	28	2
ROSAFE ADJUDICATOR	249631	5	318	234	70	68	91	90	76	81	75	65	52	80.6	37	53	10	7
ROSAFE AMBASSADOR	244042	2	29		45	52	90	76	52	45	52	52	62	78.1	21	66	14	3
ROSAFE BELLARION	241990	1	10		60	60	90	70	70	60	60	40	40	79.2	40	60	0	1
ROSAFE CENTURION	239301	5	220	92	71	71	95	89	67	63	75	77	79	81.1	46	46	8	12
ROSAFE CITATION R	267150	52	1720	819	72	72	96	95	75	70	78	67	68	80.7	46	48	6	7
ROSAFE COMBINATION	251268	1	28		43	57	82	79	43	39	57	71	79	78.3	25	57	18	2
ROSAFE COMMANDER	245118	1	44		70	73	77	86	84	84	70	73	59	80.3	27	61	11	3
ROSAFE CONSUL	245551	4	189	133	49	50	93	78	56	68	59	48	44	78.9	11	69	20	7
ROSAFE DOMINO	248762	2	154	105	76	76	94	95	78	81	79	58	71	81.6	40	55	6	7
ROSAFE EMINENT	274514	54	31	26	42	42	84	87	45	68	35	58	29	77.6	35	48	16	1
ROSAFE ENSIGN	250681	1	41		71	71	88	83	76	76	76	46	66	80.7	37	44	20	3
ROSAFE HECTOR	256209	1	11		64	64	91	82	91	91	82	55	64	80.5	27	55	18	1
ROSAFE HEPTAD	258920	2	347	188	55	56	86	83	71	71	70	63	54	79.4	17	62	21	7
ROSAFE JOHNATHAN	262688	4	500	303	63	63	90	86	57	63	57	65	52	78.3	23	60	17	9
ROSAFE LEONARDO	260598	1	10	2	70	70	70	100	80	80	70	40	90	80.0	20	60	20	1
ROSAFE MAGIC	261701	1	44	26	68	73	93	82	75	68	80	73	75	80.6	39	52	9	3
ROSAFE MAGICIAN	223366	1	44	28	80	80	93	91	84	75	84	77	91	82.1	36	64	0	4
ROSAFE MAPLE	271665	1	10	1	50	50	90	100	60	40	50	40	50	78.7	40	50	10	1
ROSAFE MARQUIS	237361	1	23	5	17	22	78	78	17	30	48	35	39	76.8	0	78	22	2
ROSAFE NEPTUNE	245677	1	10		50	60	100	80	50	50	60	90	70	79.4	0	70	30	1
ROSAFE PEARL SUPREME	264329	1	14	5	64	64	100	93	71	64	71	57	29	79.4	21	79	0	1
ROSAFE PEARL VOGELMAN	262576	7	25	6	76	80	88	92	72	80	72	64	92	81.2	44	52	4	1
ROSAFE PHOENIX	240193	1	48	6	38	42	85	96	38	52	35	60	56	77.6	40	56	4	3
ROSAFE PHOENIX DANIEL	264333	1	19	1	21	21	84	68	16	16	16	79	42	76.2	58	42	0	2
ROSAFE PONTIAC	249532	1	17	3	88	88	100	94	82	88	76	71	94	82.8	6	82	12	3
ROSAFE PONTIAC JUPITER	251671	2	784	326	51	51	93	89	57	60	57	53	49	79.0	38	53	10	12

SHOW RING STANDARDS

The show ring provides the display case for many of Canada's foremost breeders of purebred livestock. It is here that the end products of many years of breeding and selection are compared. Judging is based on breed standards as set in true type models and official score cards.

A revised classification has been recently introduced which makes productive ability a part of the traditional show ring entry requirements. This measure was taken to ensure that winning animals not only display good type but were capable of producing at a rate commendable for the breed.

The finest Canadian dairy cattle are displayed each year at the largest indoor agricultural show in the world, the Royal Agricultural Winter Fair in Toronto, Ontario.

SOUNDNESS OF PEDIGREE

The reliability of the Canadian pedigree is recognized internationally.

The formation of breed associations and the registration of purebred livestock is controlled under the Livestock Pedigree Act. Any misrepresentation involving ancestry or identification is an offence under Canadian law and is punishable by a fine or imprisonment.

Canadian Jerseys, Guernseys and Ayrshires are registered through a central recording organization located in Ottawa called the Canadian National Livestock Records. The Holstein-Friesian association conducts registration and maintains the book of record in the association head office at Brantford, Ontario.

Extended pedigrees, to three generations, are provided on request of the owner. These contain information on the production and type classifications of ancestors and relatives and are valuable aids in the assessment and selection of quality breeding stock. The information contained in Canadian extended pedigrees is made available through the many services described in this booklet: in completeness, accuracy and reliability it is among the best in the world.

PREPARED FOR:
BROWNDALE FARM,
R. F. BROWN,
PARIS, ONTARIO

FEMALE

BROWNDALE MASTER MONA 2042161

BORN: AUGUST 9, 1965

BEST RECORD OF 3 NEAREST DAMS AVERAGE:
MILK 9171 FAT 406 TEST 4.43

#BRED APRIL 7, 1967 TO BROWNDALE REFLECTION RADAR 288062.

BROWNDALE MASTER 283100
VERY GOOD
SIRE OF:
2VG 2GP 1G SONS
BROWNDALE MASTER ADA (GP)
JR.CH. FEM BRANT BW 1966
NIC-A-BAR MASTER PETER
JR.CH. BULL PERTH BW 1965
EBYDALE PATRICK
$1350 SHORE CAN.CL. 1965
EBYDALE R A MADGE
$1150 ALL-CAN. SALE 1966
STEWARTHAVEN MISTRESS ROCKETTE
$1000 SALE OF STARS 1966
JR.CH. FEM. LINCOLN BW 1966
RANDALE BONNIE MASTER
RES.JR.CH. FEM. GRAY BW 1966
NIC-A-BAR MASTER PAUL
RJ&RG.CH. BULL PERTH BW 1966

MATERNAL BROTHER OF:
SHEFFIELD SUPREME MARGO (VG)
$8000 SHEFFIELD DISP. 1960
2ND JR. HFR. CALF CNE 1958
5Y 365 7361 303 4.12

A.B.C. REFLECTION SOVEREIGN 198998
EX & CLASS EXTRA
ALL-CAN. IN 1949-50-51
211 DAUS.AVG: M122-F124% OF BCA
65 EFFECTIVE DAUS: MILK +2.7
280 DAUS: 90% GP AND BETTER
32EX 81VG 139GP 26G 2F DAUS.
31EX 59VG 4GP SONS
18 ALL-CAN. 13 RES. 15HM PROG.
38 DAUS. OVER 45400 KILOS. MILK
ALL-CAN. GETS 1953-4-5-7-9-61-2
ALL-TIME ALL-AM. GET1966

LONELM RAG APPLE MARJORY 1085334
EXCELLENT 3 STAR BROOD COW
$18,000 SHEFFIELD DISP. 1960
ALL-CAN. 3YR. HFR. 1956
6Y 305 10792 459 4.26
365 12038 511 4.25
7 LACTS.2x: 62256-2649-4.26
7 LACTS.AVG: M162-F187% OF BCA
1VG DAU: 303 KILOS FAT
1EX 3VG SONS
2 PROVEN SONS
$16,000, $15,000, $13,200 SONS

MONTVIC RAG APPLE SOVEREIGN (EX&ST)
357 DAUS.AVG: M103-F114% OF BCA
403 DAUS: 71% GP AND BETTER
9 ALL-CAN. 13 RES. 4HM PROG.
41 DAUS. OVER 45400 KILOS MILK
H.M.ALL-CAN. GETS 1946-7

A.B.C. INKA MAY (EX)
ALL-CAN. 4YR. HFR. 1947
4Y 365 10960 512 4.67 3x
(HONOUR LIST LEADER 1949)
1EX 3VG SONS
3 PROVEN SONS

BOND HAVEN R A MAPLE (VG&EXTRA)
1997 DAUS.AVG: M114-F112% OF BCA
673 EFFECTIVE DAUS: MILK +3.9
2855 DAUS: 60% GP AND BETTER
8 ALL-CAN. 4 RES. 1HM PROG.
ALL-AM. GET 1961

LONELM TEXAL MARJORY (VG-2*)
5Y 365 6733 311 4.63 3x
5 DAUS: 160 TO 511 KILOS FAT
1EX WORLD CHAMPION DAUGHTER
2VG PROVEN SONS
1 DAU. OVER 62198 KILOS MILK

TRADE SERVICES

At the service of those not already familiar with Canada are Canadian government trade representatives located at all Canadian embassies and high commissions throughout the world. These officers welcome inquiries and are prepared to offer sound advice on trade facilities, contacts within the industry, and travel arrangements.

The centres of Canada's dairy cattle population are serviced regularly by modern world airlines. Arrangements can be made through trade offices to have competent export representatives meet buyers and visitors and arrange itineraries for them to suit their needs. If interpreters are necessary, these also can be provided. In company with these knowledgeable guides it is possible to see within a day a number of the finest dairy cattle in the world. If cattle of a specific age or breeding are of interest it is possible to see a wide selection in all price ranges without excessive travel.

International banking and insurance facilities, animal health inspection services, and livestock transport and documentation services are all immediately available. Canadian exporters are prepared to move cattle to any accessible point in the world. Air transport is often preferred for particularly valuable cattle but shiploads of commercial grade cattle move regularly to international markets. These cattle too carry with them many of the better qualities resulting from the Canadian improvement services.

SOUND INVESTMENT - HIGH RETURN

A population of highly efficient, disease-free cattle, sound in type and ancestry, can only result from long and widespread application of well founded principles. Canadian dairy cattle carry these qualities. Given good management their offspring will, wherever they go, demonstrate high performance through generations to perpetuity. An investment in breeding stock is an investment in the future — those who buy Canadian, buy wisely.

BREED ASSOCIATIONS:

Canadian Cattle Breeders' Association
P.O. Box 547
Granby, Quebec, Canada

The Holstein-Friesian Association of Canada
Brantford, Ontario, Canada

Canadian Jersey Cattle Club
290 Lawrence Avenue West
Toronto 12, Ontario, Canada

Canadian Guernsey Breeders' Association
368 Woolwich Street
Guelph, Ontario, Canada

Ayrshire Breeders' Association of Canada
1160 Carling Avenue
Ottawa 3, Ontario, Canada

Canadian Brown Swiss Association
P.O. Box 393
Brighton, Ontario, Canada

Canadian Shorthorn Association
5 Douglas Street
Guelph, Ontario, Canada

For further information please contact
the Canadian Trade Office
in your area.

PUBLISHED BY THE DEPARTMENT OF INDUSTRY, TRADE AND COMMERCE OTTAWA, CANADA

Queen's Printer
Cat. No. C65–19770/1